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index.html

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Problem 1: Smart Calculator</title>
    <style>
        body {
            font-family: sans-serif;
            padding: 20px;
        }

        .calculator {
            border: 1px solid #ccc;
            padding: 20px;
            width: 300px;
            border-radius: 10px;
            background-color: #f9f9f9;
        }

        input {
            width: 100%;
            padding: 10px;
            margin-bottom: 10px;
            box-sizing: border-box;
            font-size: 1.2em;
        }

        .buttons {
            display: grid;
            grid-template-columns: repeat(4, 1fr);
            gap: 5px;
        }

        button {
            padding: 15px;
            font-size: 1.2em;
            cursor: pointer;
        }

        .history {
            margin-top: 20px;
            border-top: 1px solid #eee;
            padding-top: 10px;
        }

        /* Highlighting for better user experience */
        button:hover {
            background-color: #ddd;
        }
    </style>
</head>

<body>

    <h1>Problem 1: Smart Calculator</h1>

    <div class="calculator">
        <!-- Display Screen -->
        <input type="text" id="display" readonly placeholder="0">

        <!-- Buttons -->
        <div class="buttons">
            <button onclick="clearDisplay()">C</button>
            <button onclick="appendToDisplay('/')">/</button>
            <button onclick="appendToDisplay('*')">*</button>
            <button onclick="deleteLast()">DEL</button>

            <button onclick="appendToDisplay('7')">7</button>
            <button onclick="appendToDisplay('8')">8</button>
            <button onclick="appendToDisplay('9')">9</button>
            <button onclick="appendToDisplay('-')">-</button>
```

```html
            <button onclick="appendToDisplay('4')">4</button>
            <button onclick="appendToDisplay('5')">5</button>
            <button onclick="appendToDisplay('6')">6</button>
            <button onclick="appendToDisplay('+')">+</button>

            <button onclick="appendToDisplay('1')">1</button>
            <button onclick="appendToDisplay('2')">2</button>
            <button onclick="appendToDisplay('3')">3</button>
            <button onclick="calculateResult()">=</button>

            <button onclick="appendToDisplay('0')" style="grid-column: span 2;">0</button>
            <button onclick="appendToDisplay('.')">.</button>
        </div>

        <!-- History Section -->
        <div class="history">
            <h3>History (Last 5)</h3>
            <ul id="historyList"></ul>
            <button onclick="clearHistory()"
                style="width: 100%; padding: 5px; font-size: 0.9em; background-color: #ffcccc;">Clear History
        </div>
    </div>

    <!-- Link to JavaScript file -->
    <script src="script.js"></script>

</body>

</html>
```

script.js

```javascript
// This variable stores the history of calculations.
// An array is like a list that can hold multiple values.
let history = [];

// Function to add numbers or operators to the display
function appendToDisplay(value) {
    // Get the display element (the input box)
    const display = document.getElementById('display');

    // Add the clicked value to the current text in the display
    display.value += value;
}

// Function to clear the entire display
function clearDisplay() {
    document.getElementById('display').value = '';
}

// Function to delete the last character
function deleteLast() {
    const display = document.getElementById('display');
    // .slice(0, -1) removes the last character from the string
    display.value = display.value.slice(0, -1);
}

// Function to calculate the result
function calculateResult() {
    const display = document.getElementById('display');
    const expression = display.value;

    try {
        // eval() takes a string of math (like "2+2") and calculates it.
        // WARNING: In real professional apps, eval() can be dangerous,
        // but for a simple student lab calculator, it is fine.
        const result = eval(expression);

        // Update the display with the result
        display.value = result;

        // Add this calculation to our history list
```

```javascript
        addToHistory(expression + " = " + result);

    } catch (error) {
        // If there is an error (like dividing by zero or bad syntax), show "Error"
        display.value = 'Error';
    }
}

// Function to add a calculation to the history array
function addToHistory(entry) {
    // Add the new entry to the BEGINNING of the array using unshift()
    history.unshift(entry);

    // If we have more than 5 items, remove the oldest (the last one)
    if (history.length > 5) {
        history.pop();
    }

    // Update the screen to show the new history list
    updateHistoryUI();
}

// Function to display the history on the screen
function updateHistoryUI() {
    const historyList = document.getElementById('historyList');

    // Clear the current list HTML so we don't duplicate items
    historyList.innerHTML = '';

    // Loop through each item in our history array
    for (let i = 0; i < history.length; i++) {
        const item = history[i];

        // Create a new list item (<li>) tag
        const li = document.createElement('li');
        li.textContent = item; // Set the text inside the list item

        // Add the list item to the history list (<ul>)
        historyList.appendChild(li);
    }
}

// Function to clear the history
function clearHistory() {
    history = []; // Empty the array
    updateHistoryUI(); // Update the screen
}
```